

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appln No.: 10/036,910 ) *Confirmation No. 5104*  
Applicants: Carl M. DANIELSEN et al. )  
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TC/A.U.: 2613 )  
Examiner: David J. CZEKAJ )  
Docket No.: CR00234M (72460) )  
Customer No.: 22242 )

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P.O. Box 1450  
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**REPLY BRIEF**

Sir:

Pursuant to 37 C.F.R. §41.41, the Applicants hereby respectfully submit the following Reply Brief in support of their appeal. This Reply Brief is in response to the Examiner's Answer mailed on October 12, 2007.

Arguments begin on page 2 of this paper.

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### Argument

The Applicants supplement the previous argument as set forth in the 3<sup>rd</sup> Substitute Appeal Brief submitted on September 27, 2006 and the first Reply Brief filed October 20, 2006 as follows in order to respond to a particular position taken by the Examiner in the Examiner's Answer.

The Applicants have previously asserted that the words "substantially simultaneously" in the context of Applicants' claims are not intended, nor are they disclosed to mean or to imply, "in serial succession."<sup>1</sup> Instead, the modifier "substantially" is, in context, simply intended to reflect that two or more events may overlap imperfectly; that is, that while they must overlap to some extent, one, for example, begins somewhat before the other.

More particularly, it is clear from the specification that genuinely simultaneous (i.e., parallel) processing is being described. Paragraph 0016, for example, states, "By substantially simultaneously making this determination for a plurality of non-object pixels, a large number of new pixel values can be determined within a single clock cycle." Clearly, the only way a "large number" of "new pixel values" can be determined *within* "a single clock cycle" is to make those determinations in parallel with one another. This point of accomplishing the described events within a single clock cycle appears as a recurring theme and point in the specification. Also, it is noteworthy that the specification contains no teachings (or even a suggestion) that a serial approach will or can suffice as an example of being "simultaneous" or "substantially simultaneous."

Hence, the term "simultaneously" means the parallel processing of pixels (as will occur, for example, when effected "within a single clock cycle" and the expression "substantially simultaneously" therefore means substantially parallel processing (i.e., where there is at least some overlap in time). By the same logic, this expression is not so broad as to encompass a serial approach where there is no overlap in time whatsoever.

However, in the Examiner's Answer of October 12, 2007, the Examiner alleged that

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<sup>1</sup> See Applicants' first Reply Brief, page 10.

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substantially simultaneous processing is not the same as parallel processing. Parallel processing processes data at the same time, or simultaneously. Substantially simultaneously processing processes data close to, or almost simultaneously.

The Applicants respectfully disagree with these assertions for the reasons stated below.

To construe the meaning and scope of claim language, one first looks to the words of the claims themselves and then to the specification and prosecution history. See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314-17 (Fed. Cir. 2005) (en banc). While there may be a heavy presumption that the claim terms have the "ordinary meaning" that would be attributed to those words by persons skilled in the relevant art, heavy reliance on the written description of the patent is also appropriate when construing claim terms. *Phillips*, 415 F.3d at 1317.

Here, the Examiner ignores the Applicants' specification and, instead, relies only upon his own subjective definition of the term.<sup>2</sup> And, as supported by Applicants' specification, the term "substantially simultaneously" should be held to mean "at the same time or nearly the same time," which requires at least some overlap between processing operations.<sup>3</sup>

In using his own subjective definition, the Examiner also ignores the specific approaches used by courts to analyze terms where "substantially" modifies one or more words of a claim. More specifically, in analyzing the meaning of such a claim term, one must separately determine the meaning of "substantially" and then apply "substantially" to the word (or words) modified by "substantially" to find the meaning of the entire claim term. See *Verve, LLC. V. Crane Cams, Inc.*, 311 F.3d 1116 (Fed. Cir. 2002).<sup>4</sup>

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2 In his Answer, the Examiner offers no intrinsic or extrinsic evidence to support his interpretation.  
3 See, e.g., Application page 3, lines 27-30 and page 10, lines 13-24. This point was asserted in Applicants' 3<sup>rd</sup> Substitute Appeal brief at page 8 and page 11.

4 In *Verve, LLC v. Crane Cams, Inc.*, the claim term at issue was "substantially constant wall thickness." The Federal Circuit first held that "substantially" was a descriptive term similar to the term "about" and used to avoid a strict boundary for the "wall thickness" parameter. The Court then stated that "substantially" must be applied to "wall thickness" to properly determine the meaning of the entire term.

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In the present case, the term modified by "substantially" is "simultaneously" and, as discussed previously, "simultaneously" means "at the same time."<sup>5</sup> Also as discussed previously, "substantially" means that two or more events may overlap imperfectly (i.e., they are at or near each other).<sup>6</sup> Applying "substantially" to "simultaneously" produces a meaning that requires at least some overlap between the processing operations for multiple pixel values. Consequently, for this additional reason, the Applicants assert that the Examiner's interpretation of the term as permitting the exclusion of any overlap between the processing operations of multiple pixel values is incorrect.

Finally and also as asserted previously, the Applicants submit that other case law directly supports the Applicants' assertion that the term "substantially simultaneously" means "at the same time or nearly the same time." See *Texas Digital Systems v. Telegenix*, 64 U.S.P.Q.2d 1812, 1821 (Fed. Cir. 2002).<sup>7</sup> For this additional reason, the Applicants assert that the term "substantially simultaneously" requires at least some overlap between the processing operations of multiple pixel values as disclosed by the Applicants and as versus a *seriatim*-based process.

Respectfully submitted,

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<sup>5</sup> See Applicants' 3<sup>rd</sup> Substitute Appeal brief at pages 9-10.

<sup>6</sup> See Applicants' first Reply Brief, page 10.

<sup>7</sup> In *Texas Digital Systems v. Telegenix* the Federal Circuit construed the term "substantially simultaneously activating" of lamps means that two separate lights "are turned on at the same or nearly the same time." See Applicants' first Reply Brief, page 10.